CHAIRMAN OF THE JOINT CHIEFS OF STAFF INSTRUCTION

J-6 CJCSI 3320.03
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JOINT COMMUNICATIONS ELECTRONICS OPERATI0N INSTRUCTIONS

Reference(s): a. CJCSI 3220.01, 30 June 1997, "Electromagnetic Spectrum Use in Joint Military Operations"

b. CJCSM 3220.01, 10 October 1997, "Joint Operations in the Electromagnetic Battlespace"

c. MCEB Memorandum, 16 December 1996, "Concept of Operations (CONOPS) for the Joint Spectrum Center (JSC)"

d. "Program Budget Decision (PDB) 711R", 17 December 1997

1. Purpose. To issue policy and guidance for planning, coordinating, and producing the Joint Communications Electronics Operation Instructions (JCEOI).

2. Cancellation. CJCSI 6230.03, 21 March 1995, is cancelled

3. Applicability. This instruction applies to the Joint Staff, Services, unified commands, US elements of combined commands, Defense agencies, and joint activities.

4. Policy. All unified combatant commands and the US elements of combined commands are directed to develop and use a JCEOI to support contingency operations, training, and exercises. In order to facilitate a more seamless transition into a combined/joint operational environment, the Services, Defense agencies, and joint activities are encouraged to incorporate the described policies and procedures into their unique contingency operations, training, and exercises.

a. DOD electronic systems are critical resources that must be protected from interference through efficient utilization of the electromagnetic battlespace. The JCEOI can provide the Joint Force Commander (JFC) with the voice and data communications architecture for command and control of component forces. The JCEOI may also provide the same capability to commanders in a combined environment. Development of the Master Net List (MNL) ensures voice and data nets utilized by a Combined Task Force (CTF), Joint Task Force (JTF), or specific unit(s) are assigned a specific frequency for a given time period within specific parameters (bandwidth, power, emission, etc.). The resulting document, the JCEOI, is used by communication system operators to ensure their systems are utilizing the correct frequency assignment for a given time period.

b. The JCEOI offers some degree of Communications Security (COMSEC) protection by reducing the amount of Essential Elements of Friendly Information (EEFI) an adversary can obtain through monitoring unencrypted radio nets. This is accomplished by utilizing daily changing call signs, call words, and frequencies that are changed daily.

c. The JCEOI can provide required frequency assignment information to Service stovepipe planning systems, such as the Contingency Theater Air Planning System (CTAPS), Automated Spectrum Planning, Engineering, Coordination and Tracking System (ASPECTS), and Joint Spectrum Management System (JSMS).

d. Use of daily changing call signs; call words, and frequencies.

(1) Call signs and call words will be changed daily on all nets/circuits not protected with an encryption device. Exceptions to this may be necessary in combat or special situations for safety of life, propagation restrictions, or insufficient spectrum resources. Units will maintain the capability to implement changing call signs and call words in the event that secure capability is lost.

(2) Daily changing frequency procedures will be used on all tactical voice and data nets/circuits operating in the single channel mode except where it is necessary to deviate in special combat and fast-reaction situations, because of safety of life, platform-related electromagnetic compatibility (EMC), propagation restrictions, or because of insufficient spectrum resources.

(3) Secure, frequency-hopping radio systems such as the Integrated COMSEC (ICOM) Single Channel ground and Airborne Radio System (SINCGARS) do not require daily changing call signs, call words, or frequencies. However, because of changes in force structure or

capabilities, commanders may designate these nets as single channel. Therefore, the ability to implement daily changing call signs, call words, and frequencies will be maintained.

e. Contingency MNLs

(1) Contingency MNLs support all anticipated voice and data nets (i.e., CINC 1, JTF 3, AC 11, etc.) for the initial 24 hours of an operation. Individuals who develop the MNL should be familiar with the organization, standard and special purpose radio nets, radio frequency allocation, and the types, quantities, and characteristics of the radios available.

(2) When deemed appropriate by the CINC or JTF commander, if release authority has been delegated, MNLs that have been prepared for US forces may be provided to allies in accordance with the requirements and procedures of DOD Directive 5230.11 and CJCSI 5221.01.

5. Definitions. See Glossary.

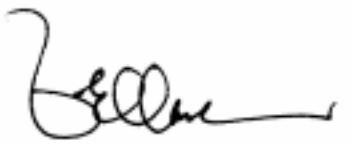
6. Responsibilities. See Enclosure A.

7. Summary of Changes. See Enclosure B.

8. Releasability. This instruction is approved for public release; distribution is unlimited. DOD components (to include the combatant commands), other Federal agencies, and the public may obtain copies of this instruction/ manual/notice through the Internet from the CJCS Directives Home Page--http: //www.dtic.mil/doctrine/jel/cjcsd.htm. Copies are also available through the Government Printing Office on the Joint Electronic Library CD-ROM.

9. Effective Date. This instruction is effective upon receipt.

For the Chairman of the Joint Chiefs of Staff:



V.E. Clark
Vice Admiral, U.S. Navy
Director, Joint Staff

Enclosure(s):
A - Responsibilities
B – Summary of Changes
C - Glossary

DISTRIBUTION

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ENCLOSURE A

RESPONSIBLITIES

1. The Chairman of the Joint Chiefs of Staff will:

a. Provide policy oversight on development of a joint standard for exchange of JCEOI information.

b. Identify, assess, and recommend measures to ensure the JCEOI process and development is mutually supporting and effective in joint and combined operations.

c. Coordinate deconflicted call word dictionaries with the CINC J-6s and Services.

2. CINCs with geographic Areas of Responsibility (AOR) will:

a. Establish command-specific policy and guidance for development and use of the JCEOI consistent with this instruction that uniquely applies to their area and command structure.

b. Function as the controlling authority for their JCEOIs.

c. Establish a JCEOI management function to control the JCEOI process, structure, and procedures to support planned and ongoing operations.

(1) Ensure Operations Plans (OPLANs) and applicable annexes address coordination among forces for JCEOI structure and exchange of information.

(2) Establish procedures for deconfliction of call signs and call words within their AOR.

(3) Ensure liaison is made with appropriate foreign military and multilateral forces (e.g., United Nations Forces, NATO) operating as part of combined operations to ensure that unique requirements are met as part of a CJCEOI.

3. The CINC J-6 will:

a. Develop, produce, and maintain contingency MNLs for their supported and supporting OPLANs.

b. Serve as the central point of contact for the JCEOI until the JTF J-6 is activated (stood up).

c. Ensure distribution plans for the JCEOI are established.

d. Ensure a deconflicted call word dictionary is available for forces operating within AOR.

e. Exercise and delegate JCEOI generation authority.

f. Provide technical support to the JTF J-6.

g. Ensure that all CINC voice and data net requirements are considered for inclusion in the joint layer of the MNL.

h. Establish procedures to determine secure/non-secure status (e.g., at the net controller level) of CINC voice and data nets/circuits.

4. The CINC J-3 will:

a. Identify applicable joint layer net requirements to the J-6 for inclusion in the MNL.

b. Provide J-6 with the force structure and concept of operations.

5. The CINC J-2 will identify applicable joint layer net requirements to the J-6 for inclusion in the MNL.

6. When activated, the JTF Commander will:

a. Follow CINC JCEOI development guidance.

b. Assume the CINC responsibilities outlined in paragraph 6b for the JTF's geographic AOR.

c. Ensure systems are operated IAW paragraph 4d.

d. Establish procedures to determine secure/non-secure status (e.g., at the net controller level) of JTF voice and data nets/circuits.

7. When activated the JTF J-6 will:

a. Develop, produce, and maintain contingency MNLs for their supported and supporting OPLANs.

b. Serve as the central point of contact for the JCEOI once activated (stood up).

c. Assume the CINC J-6 responsibilities outlined in paragraph 6b for the JTF's geographic AOR.

8. The Services will:

a. Ensure that personnel assigned the task of JCEOI development have adequate security clearances to operate in a joint environment.

b. Equip and train personnel to operate the DOD standard JCEOI information system. Personnel who develop MNLs and generate JCEOIs will be trained through the Battlefield Spectrum Managers Course (BSM) at Ft Gordon or the Interservice Radio Frequency Management School (IRFMS) at Keesler AFB. Receiving only on-the-job training (OJT) has proven to be inadequate.

c. Ensure that all voice and data net requirements supporting the JTF are passed to the CINC J-6 or JTF J-6 IAW with established procedures.

d. Establish internal policy IAW this instruction, during all operations under the train-as-you-fight concept.

e. Establish procedures to determine secure/non-secure status (e.g., at the net controller level) of voice and data nets/circuits.

9. Joint activities will establish internal policy and procedures consistent with this instruction.

10. The Director, National Security Agency/Chief, Central Security Service, as principal information systems security (INFOSEC) adviser to the Secretary of Defense, the Director of Central Intelligence, and the Chairman of the Joint Chiefs of Staff, is responsible for:

a. Executing the INFOSEC responsibilities of the Secretary of Defense in support of the JCEOI development process and distribution.

b. Providing guidance for use of call signs and call words in support of the JCEOI, and security considerations involved with distribution and release of data and software to coalition forces.

11. The Commander, Joint Spectrum Center, under the operational direction of the Joint Staff J-6 and the Defense Information Systems Agency (DISA), (references c and d) will:

a. Assist in the development of policy and guidance for the JCEOI to CINC/JTF commanders.

b. Provide direct support teams, as required, to the CINC/JTF commanders in support of JCEOI development and use.

12. Electromagnetic-dependent equipment users will:

a. Adhere to the policies set forth by the CINC/JTF Commanders concerning JCEOI development and use.

b. Operate equipment within the parameter set forth by the JCEOI and obtain approval from the controlling authority or delegated representative to modify those parameters.

c. Operate according to the instructions set forth in the JCEOI and IAW special instructions (i.e. call sign, call word, sign/countersign).

ENCLOSURE B

SUMMARY OF CHANGES

1. This revised instruction is a significant rewrite of CJCSI 6230.03, which was last updated on 21 March 1995. (The Communications-Electronics Operation Instruction (CEOI) and Joint Communications Electronic Operation Instruction (JCEOI) are used by communication system operators to ensure that systems within specific units/ organizations are using the correct frequency assignment, callsign and callword for a given time period.) In addition to the information in the previous instruction, a revision was required to include, in detail, all the responsibilities of the combatant commanders.

2. This instruction:

a. Focuses on the policy and guidance for planning, coordinating, and producing the JCEOI.

b. Does not specify the software used to generate the JCEOI -- the software will be continually upgraded and changed.

c. Mandates the use of the CEOI/JCEOI in the joint tactical environment.

d. Describes, in detail, the responsibilities of the chain of command from the Joint Staff to the equipment user.

3. The previous instruction focused on the Revised Battlefield Electronic CEOI System (RBECS) software that was used to generate the CEOI/JCEOI. It mandated the use of the CEOI/JCEOI in the tactical environment and directed that the combatant commands, Services, and Defense agencies focus on the use of RBECS only in developing and maintaining contingency CEOI/JCEOIs. This new instruction, when used with Spectrum Management engineering software, (e.g., Joint Spectrum Management System (JSMS)) ensures that the assigned frequencies in a specific time period operate within the proper bandwidth, power, and emission designator. The JCEOI provides the combined task force (CTF) commander as well as the joint force commander (JFC) with the voice and data communications architecture for command and control of component forces.

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GLOSSARY

Area of Influence (AOI) (**). The electromagnetic environment, surrounding the AOR where a potential for electromagnetic interaction exists.

Area of Responsibility (AOR) (*). A defined area of land in which responsibility is specifically assigned to the commander of the area for the development and maintenance of installations, control of movement, and the conduct of tactical operations involving troops under the commander's control, along with parallel authority to exercise these functions.

Combined. Two or more forces or agencies of two or more allies.

Communications Security (COMSEC) (*). The protection resulting from all measures designed to deny unauthorized persons information of value which might be derived from the possession and study of telecommunications, or to mislead unauthorized persons in their interpretation of the results of such possession and study.

Contingency Master Net List (MNL). An MNL developed for an OPLAN to support requirements that can reasonably be expected in an area of responsibility.

Controlling Authority. The authority that is designated to a command or individual who has the responsibility for overall protection, distribution, and documentation of a JCEOI.

Deconfliction (**). A systematic management procedure to coordinate the use of the electromagnetic spectrum for operations, communications, and intelligence functions.

DoD standard JCEOI Information System. System designated by the Joint Chiefs of Staff as the standard for development and production of the JCEOI. Current standard system is the Revised Battlefield Electronic CEOI System (RBECS).

Electromagnetic Battlespace (**). The electromagnetic Battlespace includes: background environmental information; the hostile (red), friendly (blue), UN, Host nation, and coalition (gray) forces electromagnetic order of battle (EOB), within the JFC's AOR and area of influence (AOI).

Electromagnetic Compatibility (EMC) (*). The ability of systems, equipment, and devices that utilize the electromagnetic spectrum to operate in their intended operational environments without suffering unacceptable degradation or causing unintentional degradation because of electromagnetic radiation or response. It involves the application of sound electromagnetic spectrum management; system, equipment, and device design configuration that ensures interference-free operation; and clear concepts and doctrines that maximize operational effectiveness.

Electromagnetic-dependent equipment. Any electronic system (transmitter or receiver, or both) that utilizes the electromagnetic spectrum.

Electromagnetic spectrum (*). The range of frequencies of electromagnetic radiation from zero to infinity.

Essential Elements of Friendly Information (EEFI) (*). Key questions likely to be asked by adversary officials and intelligence systems about specific friendly intentions, capabilities, and activities, so they can obtain answers critical to their operational effectiveness.

Frequency assignment. Authorization given by an authority for a radio station to use a radio frequency or radio frequency channel under specific conditions.

Generation authority. The authority placed upon a staff component, individual or commands having overall responsibility for generating the JCEOI. This includes gathering all information from subordinate elements, combining requirements, changes to the original document, and for creating reserve editions.

Integrated COMSEC (ICOM). Systems designs, that have in-line cryptographic hardware, built into the system.

Joint Communications Electronic Operation Instruction (JCEOI). A document that is created to provide the JFC the voice and data network architecture to support operations. This document provides the technical characteristics of the net. A JCEOI contains or relates to the following subsections:

Call signs and call words are utilized for identifying members of a net/circuit. Call sign. Any combination of alpha characters or phonetically pronounceable characters (trigraph), which identifies a communication facility, a command, an authority, an activity or unit; used primarily for establishing and maintaining communications. Call word. Pronounceable words that identify a communications facility, a

command, an authority, an activity, or a unit; serves the same functionality as the call sign.

Master Net List (MNL). The MNL, both generated and raw, is a basic part of all JCEOIs. As a minimum the MNL includes the circuit/net name, frequency or frequency band, call sign/call word requirements, and share group information. It is usually subdivided in different sections, or layers.

Joint Layer. The inclusion of a circuit into the joint layer must meet at least one of the following requirements:

1) The net/circuit will be utilized by the JFC or JFC staff for command and control of subordinate elements, or

2) The JFC receives command and control orders on the net/circuit, or

3) The net/circuit is controlled by a single Service component and used by other Service components to coordinate support, fire control, safety or link up operations.

Additional layers. Usually the MNL is further subdivided into other layers, such as the components, then Corps/Fleet/Wing, or further still as the Generation Authority directs.

UN-Generated (or raw data) JCEOI. Contains the MNL, call sign/call word dictionaries, index pages, reference pages, smoke and pyrotechnic signals definitions, suffix and expander pages, page definition (net groups), separation plans, share plans and reuse plans.

Generated JCEOI. The final product of all inputs and consists of randomly generated data that was initially input into the UN-Generated JCEOI. From this product a user can define output pages and revise many of the products based on requirement changes or output options.

Revised SINCGARS ICOM/Non-ICOM Support Software RSINISS. Currently a module in RBECS that supports the management of resources the SINCGARS radio is authorized to use for frequency hopping information (hopsets), loadset (is a required output to the SINCGARS radio-transmitter that includes Net ID and Cryptographic Key identification, and loadset ID), the generation and management of the TRANSEC Key (TSK)(which provides the SINCGARS radio with the sequence of frequency order it is to use in frequency hopping mode), and also includes the capability to create mobile subscriber equipment (MSE) radio access unit (RAU) frequency pairs.

Joint Force Commander (JFC) (*). A general term applied to a commander authorized to exercise combatant command (command authority) or operational control over a joint force.

Joint Task Force (JTF) (*). A force composed of assigned or attached elements of the Army, the Navy or the Marine Corps, and the Air Force, or two or more of these Services, which is constituted and so designated by the Secretary of Defense or by the commander of a unified command, a specified command, or an existing joint task force.

On-the-Job Training (OJT). A method of military training that imparts knowledge of procedures to a trainee to accomplish a task without the trainee attending a class of formal instruction.

Operation Plan (OPLAN) (*). Any plan, except for the Single Integrated Operation Plan, for the conduct of military operations. An OPLAN identifies the forces and supplies required to execute the CINCs Strategic Concept and a movement schedule of these resources to the theater of operations. The plan is prepared with the appropriate annexes, appendixes, and time-phased force deployment data (TPFDD) files.

Revised Battlefield Electronic Communications Electronics Operation Instructions System (RBECS). Current DOD Standard software used to produce a JCEOI.

Secure mode. A generic term referring to a method of communications that denies information to unauthorized recipients. The channel/ circuit/net is secured by physical means or by the provision of on-line crypto equipment (Cryptographic) as appropriate.

Sign/countersign (*). A secret challenge and its reply.

Single Channel Ground and Airborne Radio System (SINCGARS). A specific radio that has the capability to frequency hop from 30 MHz to 88 MHz ranges.

Spectrum Management (*). Planning, coordinating, and managing joint use of the electromagnetic spectrum through operational, engineering, and administrative procedures with the objective of enabling electronic systems to perform their functions in the intended environment without causing or suffering unacceptable interference.

Task Force (*). A temporary grouping of units under one commander formed for the purpose of carrying out a specific and/or continuing operation or mission.